



U.S. Department
of Transportation
**Federal Transit
Administration**

Memorandum

Subject: Review of Information Submitted on Proposed Rail
Realignment at the Honolulu National Airport for the
Honolulu High-Capacity Transit Corridor Project

Date: April 22, 2010

From: Susan Borinsky
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To: Leslie Rogers
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Region 9 - San Francisco

Summary

This memorandum documents FTA's consideration of whether to supplement the November 2008 draft environmental impact statement (EIS) for the Honolulu High-Capacity Transit Corridor Project (Project) due to a minor shift in the alignment near Ke'ehi Lagoon Park at the end of two runways at Honolulu International Airport (HNL). The City and County of Honolulu (City) developed an analysis of the environmental impacts caused by the shift in accordance with 23 CFR § 771.130(c). FTA's initial conclusion is that there is no need to supplement the draft EIS prior to issuance of a final EIS. This determination is based on an independent review of the City's analysis which included a site review by several FTA staff and numerous discussions between the several agencies involved.

Background

In January 2009 the City identified the Airport Alternative as the preferred alternative for the development of a final EIS through Honolulu City Council Resolution 08-261. This preferred alignment in the vicinity of HNL would enter airport property on the northwest section of HNL, would continue east and cross onto Aolele Street where it would run along the mauka side of the road, and continue through HNL property until it reaches Lagoon Drive.

The City was formally notified by FTA's Project Management Oversight consultant on June 30, 2009, that the project alignment intruded into two runway protection zones (RPZ) for HNL, for runways

4L/22R and 4R/22L at HNL.¹ This discovery spurred numerous discussions between the City and FTA. On October 19, 2009, representatives from the FTA, City, Federal Aviation Administration (FAA), and Hawaii Department of Transportation – Airports Division (HDOT) met at HNL to determine the best course of action to ensure compatibility between airport operations and the Project. This meeting generally identified the many impacts of shifting both runways, 4L/22R and 4R/22L, toward the sea (makai) to avoid the project alignment.

A shift of the runway toward the sea presented many new environmental impacts some of which would be quite substantial, which eventually led to consideration of this shift in the alignment that is the subject of this memorandum.

City's Runway Shift Proposal

To help mitigate the impact of the preferred alternative rail alignment on the runway protection zones, the City proposed in a letter to FTA dated November 3, 2009 to shift Runway 4R/22L and the associated taxiway several hundred feet to the south and lower Runway 22R's declared landing distance to indicate use of this runway by slower aircraft in Aircraft Approach Category A and B. The City's intent for the proposed mitigation was to allow the preferred alignment to remain outside of the central portions of the runway protection zones.

In response, FAA verbally shared some of their concerns with the City, HDOT, and FTA over the course of several discussions, prepared and transmitted to FTA on April 7, 2010 an evaluation of Honolulu International Airport Rail Transit Alignment Options. As expressed in the evaluation, the FAA generally does not support lowering declared landing or takeoff distances of runways as a means to mitigate adverse impacts to runways that currently meet FAA design standards caused by the introduction of a new penetration of the runway safety area or runway protection zone. Declared distances are used at existing constrained airports where it is otherwise impracticable to meet standards by other means and not when new obstructions are proposed to be introduced into the runway protection zones.

Although the FAA does not support the use of declared distances for the placement of new facilities, FAA did undertake an analysis of the City's proposed mitigation of shifting the runway and lowering of declared landing distances. These potential impacts include relocating expensive visual and electronic navigational equipment, critical power and communication cables, runway lights, and the development of new approach and departure procedures. Some key identified permanent and temporary airport impacts that could also affect sensitive ecological resources, other Federal operations, and surrounding communities are outlined below and described further in the *Federal Aviation Administration Input for the Federal Transportation Administration Honolulu High-Capacity Transit Corridor* April 9, 2010,.

During construction at the airport, Runway 4R would be out of commission for an extended period of time. This would affect the airport's ability to maintain the safe flow of traffic and would remove from service one of the two runways at the airport with an instrument landing system which is needed when visual landings cannot be conducted. Runway 4R is also one of two runways that the U.S. Air Force

¹ FAA Advisory Circular (AC) 150/5300-13, *Airport Design*, Paragraph 212, indicates the runway protection zone's function is to enhance the protection of people and property on the ground. The runway protection zone is trapezoidal in shape and centered about the extended runway centerline. AC 150/5300-13 provides the required dimensions for a runway protection zone, which is based on the type of aircraft using the runway and the approach visibility minimum associated with that runway end. The runway protection zone for the Runway 22L and 22R ends is 1700 feet long and the rail line would cross through these runway protection zones.

maintains a Barrier Arresting Kit-12/14 system which is used for emergency recovery of high performance military aircraft. During construction, if there was a military aircraft emergency, the U.S. Air Force would have to rely on the same runway that all passenger and cargo arrivals and departures use and would result in substantial delays and potential diversions of airport traffic. The U.S. Air Force would also be without a backup arresting barrier system.

Runway 4R also serves as the main arrival runway at HNL during night-time hours in order to reduce adverse noise impacts to noise sensitive land uses to the west of the airport. Shifting the traffic to other runways at night during construction would increase the number of residential communities exposed to adverse noise impacts and would add to airport traffic delays in arrivals at the airport.

Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR) extend approximately 2,400 feet beyond the end of Runway 4R. Shifting the runway south toward the lagoon would mean that new runway light stations would be required in the environmentally sensitive lagoon. This area is designated by the State of Hawaii as conservation land and any use will need a conservation use permit, and potential U.S. Army Corps permit and Clean Water Act permit. The use of Conservation lands are regulated by the State of Hawaii, Board of Land and Natural Resources. In addition, coordination with the U.S. Fish and Wildlife Service regarding any federally listed threatened and endangered species and any Coastal Zone development issues would need to be addressed.

Substantial further analysis would be required to determine whether any of these changes would be feasible at HNL and what the full effect of potentially significant environmental and financial impacts would be. FAA and HDOT estimated that the cost of airport-related costs from shifting the runway and use of declared distances could range between \$102.2 million and \$127.8 million and would require 2-3 years of additional safety and environmental analysis.

Description of the Proposed Ualena Street Realignment

Based on the discussions among the agencies and prior to the submission of FAA's evaluation document, the City sent a letter on April 5, 2010 to FTA's Administrator Peter Rogoff proposing a shift in the alignment that would avoid encroachment into the central portion of the runway protection zones for Runways 4R/22L and 4L/22R.

This proposal is described as the following:

Heading in an easterly direction (toward Koko Head) from the Honolulu Airport Station, the alignment follows Aolele Street (mauka side) approximately 5,000 feet until it begins a transition across 6 parcels (all partial takes owned by HDOT) to Ualena Street. This parallel shift of approximately 200 feet toward Ualena which is the approximate length of the parcels, places the rail alignment on a course to avoid all but a short non-central edge of the RPZ for runway 4R/22L. The alignment continues on Ualena to the newly located Lagoon Drive Station which takes 2 full and 4 partial parcels and 3 businesses. East of Lagoon Drive the street name changes to Waiwai Loop and takes 2 full and 1 partial parcels and 1 business to enter Keehi Lagoon Park. Within Keehi Lagoon Park the alignment travels about 1,200 feet until it intersects the alignment described in the 2008 DEIS. Overall, the shift to Ualena shortens the amount of alignment in the park by 800 feet from 2,000 feet in the 2008 DEIS to 1,200 feet in the 2010 FEIS and nearly completely avoids the RPZ.

Supporting Documents and Discussions

FTA has independently reviewed numerous documents and drawings that provide information on the environmental impacts associated with the shift in alignment, as well as information provided by email. A non-inclusive list of those documents is provided here, with all documents listed here attached:

- June, 17, 2009 – Memorandum to Dave Chamberlain and John Englert of Jacobs Engineering from Heath Marsden and Steve Berardo of Jacobs Engineering on the Honolulu High Capacity Transit Project near HNL Runways 22L/22R [HNL HHCTOP Memo 09-06-23.pdf]
- March 31, 2010 – Initial City of Honolulu submittal containing information on impacts along Ualena Street [Ualena Option.doc; UalenaAlternative.pdf; UalenaEligibilityForms.pdf; App B Plan-Profile Ualena.pdf; Appendix C ROW sheets for Ualena.pdf; historic resources.pdf; Original APE from DEIS.pdf; Visual Simulation Keehi Lagoon Beach Park (with Aolele to Ualena St. transition).pdf]
- April 6, 2010 – Subsequent City of Honolulu submittal containing information on impacts along Ualena Street and information request by FTA [Response Airport Options.doc; Alignment Info.xls]
- April 7, 2010 – Email from Timothy Mantych (PMOC) to Nadeem Tahir (FTA) and Raymond Sukys (FTA) containing the PMOC's analysis of potential impacts along Ualena Street and possible mitigation
- April 21, 2010 – Email from Elizabeth Zelasko (FTA) to Christopher Van Wyk (FTA) and Carl Bausch (FTA) concerning the proximity of the Ualena Street alignment to the Hawaii Employers Council Building
- April 21, 2010, - City of Honolulu draft evaluation of the Refinement of Airport Alternative (Aolele Street Transition to Ualena Street) presented in Draft EIS, November 2008 [Refinement of Airport Alternative FEIS, April 2010.pdf]

As part of its review, FTA also engaged in numerous discussions over the relative levels of environmental impacts from the minor variation in alignment. A non-inclusive list of those meetings is provided here:

- October 19, 2009 – FTA, HDOT, FAA and the City at the FAA's office in HNL
- December 10, 2009 – Teleconference with FAA, City, HDOT and FTA
- December 21, 2009 with FAA, DTS, HDOT, and FTA teleconference
- January 13, 2009 – Meeting at FAA Western Pacific Region with the City and FAA
- March 3, 2010 – FTA and FAA meeting in Region IX
- **DATE – FAA and FTA (HQ MEETING – NEED DETAILS)**
- March 16, 2010 – FTA site visit to review various alignments including Ualena Street alignment in Honolulu
- March 17, 2010 – FTA, FAA, City of Honolulu, and HDOT Airports Division meeting in Honolulu
- April 20, 2010 – FTA and Mayor of Honolulu meeting in Washington, DC

Conclusions

Based on its review of the information submitted by the City, discussions with multiple agencies involved, and its own independent review, FTA is making an initial determination, pursuant to 23 CFR § 771.130(b)(2), that “changes to the proposed action . . . [will] result in a lessening of adverse environmental impacts evaluated in the EIS without causing other environmental impacts that are

significant and were not evaluated in the EIS.” The impacts related to this change in alignment are themselves not significant. The information and impacts associated with minor alignment shift to Ualena Street will be incorporated in the final EIS and FTA will invite public comment in that document.

In addition, FTA will engage in the necessary consultation under Section 106 of the National Historic Preservation Act in order to assess the effect of the small shift in the alignment on properties that are eligible for or may be eligible for the NRHP. Through the course of that consultation, FTA will reconsider this determination if new information relevant to environmental concerns is discovered.

Concur _____

Date _____

Non concur _____

Date _____

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